MA 36 F (88)-1

CURRENT INDUSTRIAL REPORTS

Major Household Appliances

1988

U.S. Department of Commerce
BUREAU OF THE CENSUS

MA36F(88)-1
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SUMMARY OF FINDINGS

During 1988, the total value of shipment of major household appliances was $11,512.3 million, an increase of less than one percent over $11,489.1 million in 1987. Electric ranges and parts accounted for $1,809.2 million; gas ranges and parts, $648.5 million; refrigerators, $3,156.6 million; washing machines and dryers, $2,887.8 million; and dishwashing machines, food waste disposers, floor waxing machines, and trash compactors, $1,267.4 million. The corresponding figures for 1987 were electric ranges and parts, $1,963.9 million; gas ranges and parts, $666.5 million; refrigerators, $3,017.2 million; washing machines and dryers, $2,790.4 million; and dishwashing machines, food waste disposers, floor waxing machines, and trash compactors, $1,286.0 million.

A description of the survey methodology and related information appears on page 8.

Table 1. QUANTITY AND VALUE OF SHIPMENTS OF MAJOR HOUSEHOLD APPLIANCES: 1988 AND 1987

(Quantity in thousands of units; value in millions of dollars)

Product code	Product description	Number of companies	1988		1987	
			Quantity	Value	Quantity	Value
	Major household appliances	(X)	(X)	11,512.3	(X)	11,489.1
3631 —	Electric ranges, ovens, and surface cooking units, equipment, and parts	32	7,963.7	1,809.2	8,300.3	1,963.9
	Free-standing ranges (widths are based on outside dimensions):					
3631 11	Under 21 (58.4 cm) inches in width, all types, including apartment house type	7	79.2	13.9	112.1	19.3
	21 (58.4 cm) inches up to and including 32 (81.3 cm) inches in width:					
3631 21	Low oven (including slide-in)	10	2,079.0	603.7	2,361.2	676.5
3631 24	High oven	5	29.3	18.8	41.3	23.9
3631 26	High-low oven	7				
3631 35	33 (83.8 cm) inches and over in width, all types	5	(D)	(D)	(D)	(D)
	Other than free-standing:					
	Built-in ranges:					
	Built-in ovens:					
3631 51	Single oven	8	242.8	87.6	230.6	78.9
3631 55	Two ovens	6	95.7	69.0	90.3	63.9
3631 61	Surface cooking tops	10	409.6	29.5	432.2	80.5
3631 65	Drop-in ranges	7	183.2	64.9	237.9	73.7
3631 73	Microwave ranges and ovens (including combination microwave/electric ranges and built-in ovens which utilize microwave and electric thermal energy in one or more of the oven cavities)	9	88.6	88.7	132.8	110.8
3631 74	Microwave ovens, including counter top, built-in and wall or cabinet hung ovens	11	4,415.2	639.5	4,476.4	630.4
3631 79	Other electric and electronic ranges and ovens not listed above	3	(D)	(D)	(D)	(D)
3631 85	Parts and accessories for household electric ranges and ovens, such as burners, rotisseries, oven racks, broiler pans, etc., (sold separately)	22	(X)	163.6	(X)	192.2

See footnotes at end of table.

Address inquiries concerning these figures to U.S. Department of Commerce, Bureau of the Census, Industry Division, Washington, D.C. 20233, or call Odelle S. Thomas, (301) 763-2824.

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Table 1. Quantity and value of exports of [illegible] and [illegible]: [illegible]

(Quantities in thousands of units; value in thousands of dollars)

Product code	Product description	Number of countries	1964		1967	
			Quantity	Value	Quantity	Value
7321.1 --	Gas household heaters, ranges, and surface cooking units; roasters, and parts thereof	14	2,114.1	4,454.1	2,884.3	6,006.5
	Standard type, thermostatic:					
7321.1 11	Over 14 cu. ft. per burner rating for and over	3	1.1	1.1	43.9	31.9
7321.1 15	Over 14 cu. ft. per burner to 14 cu. ft. per burner rating for and over	8	1,401.1	4,453.1	1,881.1	3,864.0
7321.1 21	Apartment ranges, 24 to 30 inches cooking top and oven/bro...	4	711.4	4.1	1,111.1	1,111.6
7321.1 27	Standard type, for built-in installation (built-in, or other...					
	or oven, broiler unit	3	1.1	1.1	1,111.1	1,111.1
7321.1 31	Surface cooking type (use of more burners)...	4	1.1	1.1	111.1	111.1
	Apartment ranges:					
7321.1 41	Wall hung...	3	--	1.1	1.1	1.1
7321.1 51	Slide-in or drop-in (console or low unit) a gravity oven...					
	surface with a kitchen cart...	3	1,111.1	1.1	1,111.1	1,111.1
7321.1 61	Other gas household ranges, ovens, hot plates, and surface cooking units, not listed elsewhere...	4	1.1	1.1	1.1	1.1
7321.1 81	Parts and accessories for gas household ranges and ovens, such as, burners, rotisseries, oven racks, broiler pans, etc., (also separately)...	11	1.1	1.1	(X)	1.1
7321.2 --	Gas household heaters and cooking equipment (except gas and electric and surface cooking equipment, including parts and accessories...	11	1,111.1	1,111.1	1,111.1	1,111.1
	Refrigerants, grills, ovens, broilers, etc., for outdoor cooking and other cooking:					
	Permanently installed units:					
7321.2 11	Gas fuel or both gas and other fuel...	1	1.1	1.1	1,111.1	1,111.1
7321.2 13	Solid fuel (charcoal, wood, coal, etc.)...					
7321.2 15	Liquid fuel (oil, kerosene, etc.)...					
7321.2 19	Electric...					
	Portable units:					
7321.2 21	Gas fuel or both gas and other fuel...	3	1,111.1	1,111.1	1,111.1	1,111.1
7321.2 23	Solid fuel (charcoal, wood, coal, etc.)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7321.2 25	Liquid fuel (oil, kerosene, etc.)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7321.2 27	Electric...					
7321.2 31	Parts and accessories for outdoor cooking equipment (except...	11	1.1	1.1	(X)	1.1
7322.1 --	Household refrigerators, including combination refrigerator-freezers...	14	1,111.1	1,111.1	1,111.1	1,111.1
	Compression type, fitted with separate external door:					
	(Includes all combination with two or more external doors.)					
7322.1 11	4.4 cu. ft. and under (under 124...	3	111.1	1.1	111.1	1.1
7322.1 13	4.5 to 9.4 cu. ft. (124 liters but under 249...	3	1.1	1.1	(D)	(D)
7322.1 19	9.5 to 13.4 cu. ft. (269 liters but under 381 liters)...	3	1.1	1.1	111.1	111.1
7322.1 21	13.5 to 17.4 cu. ft. (382 liters but under 493 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.1 23	17.5 to 19.4 cu. ft. (494 liters but under 549 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.1 25	19.5 to 21.4 cu. ft. (550 liters but under 606 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.1 27	21.5 cu. ft. and over (606 liters and over)...	3	1,111.1	1,111.1	1,111.1	1,111.1
	Absorption type, electrical, fitted with only one external door:					
7322.1 31	4.4 cu. ft. and under (124 liters)...	3	1.1	1.1	1.1	1.1
7322.1 34	Other household refrigerators, (compression type, fitted with only one external door)...	3	1.1	1.1	1.1	1.1
7322.2 --	Food freezers, complete units, for freezing and/or storing frozen food (household size)...	14	1,111.1	1,111.1	1,111.1	1,111.1
	Upright type freezers:					
7322.2 11	4.4 cu. ft. and under (under 124 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.2 13	4.5 to 9.4 cu. ft. (124 liters but under 269 liters)...	3	1.1	1.1	(D)	(D)
7322.2 15	9.5 to 13.4 cu. ft. (269 liters but under 381 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.2 17	13.5 to 17.4 cu. ft. (382 liters but under 494 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.2 19	17.5 to 19.4 cu. ft. (495 liters but under 549 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.2 21	19.5 to 21.4 cu. ft. (550 liters but under 606 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.2 23	21.5 cu. ft. and over (606 liters and over)...	3	1,111.1	1,111.1	1,111.1	1,111.1
	Chest type freezers...	11	1,111.1	1,111.1	1,111.1	1,111.1
7322.2 31	4.4 cu. ft. and under (under 124 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.2 33	4.5 to 9.4 cu. ft. (124 liters but under 269 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.2 35	9.5 to 13.4 cu. ft. (269 liters but under 382 liters)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.2 37	13.5 cu. ft. and over (382 liters and over)...	3	1,111.1	1,111.1	1,111.1	1,111.1
7322.3 --	Parts and attachments for household refrigerators and freezers (excludes compressors and condensing units and ice making machines)...	11	(X)	1,111.1	(X)	1,111.1

See footnotes at end of table.

Table 1. QUANTITY AND VALUE OF SHIPMENTS OF MAJOR HOUSEHOLD APPLIANCES: 1988 AND 1987--Continued

(Quantity in thousands of units; value in millions of dollars)

Product code	Product description	Number of companies	1988		1987	
			Quantity	Value	Quantity	Value
36150 --	Household laundry machines (household type defined as having a dry linen capacity not exceeding 10 kg (22 lbs.) and parts.....	9	(X)	2,887.8	(X)	2,790.4
	Washing machines, mechanical, includes those with dishwasher attachments:					
	Fully automatic washing machines (electric)					
36150 11	Coin-operated.....	5	241.1	96.1	239.2	86.9
36150 51	Non-coin operated.....	8	6,200.1	1,624.4	5,729.6	1,529.0
36150 57	Other washing machines, including machines with a built-in centrifugal drier and gasoline driven.....	3	147.9	83.7	131.3	76.3
	Driers, mechanical (incorporating heat):					
36150 61	Gas (non-coin operated).....	6	1,037.0	234.7	1,019.9	231.0
36150 65	Electric (non-coin operated).....	5	3,270.1	630.0	3,229.7	622.1
36150 75	Coin operated.....	5	162.7	49.6	129.1	45.6
36150 90	Other drying equipment (not incorporating heat) centrifugal, extractors, spinners, etc.....	-	-	-	-	-
	Parts, accessories, and attachments for household laundry equipment (sold separately):					
36150 95	For household washing machines.....	8	(X)	149.0	(X)	172.-
36150 97	For household drying machines.....	7	(X)	22.3	(X)	r27.5
36190 --	Water heaters, electric (for permanent installation).....	13	3,760.6	198.0	3,700.9	182.7
	Storage type (gallons):					
36190 11	34 and under.....	10	1,121.3	108.9	1,089.1	103.0
36190 12	35 to 44.....	11	1,136.0	115.8	1,126.4	110.4
36190 13	45 to 54.....	10	1,099.7	119.6	1,062.2	113.5
36190 15	55 and over.....	10	403.6	53.7	421.2	55.8
36190 99	Other types, including circulating and portable storage.....	3				
36192 --	Water heaters (except electric).....	17	6,292.6	566.2	6,055.7	523.6
	Direct fired water heaters:					
36192 13	Gas.....	10	4,116.9	516.5	3,892.0	498.6
36192 14	Oil.....	6	r45.0	r14.6	r42.2	r13.2
36192 17	Coal or wood tank heaters.....	-	-	-	-	-
36192 33	Indirect water heaters, including storage, coil or coil type (heat tank); tanks (with or without generator coils); generator coils with tank collar (sold without tank); and instantaneous.....	10	130.7	15.1	121.5	11.8
36194 --	Household dishwashing machines, food waste, disposers, flour-waxing machines, trash compactors and parts.....	24	(X)	1,267.4	(X)	1,286.0
	Dishwashing machines:					
36194 12	Portable type, including convertible type.....	5	285.8	71.4	274.3	72.5
36194 16	Built-in type.....	6	3,566.2	809.7	3,838.7	834.3
36194 61	Floor-waxing, polishing, scrubbing, and shampooing machines (for household use only).....	6	1,081.4	56.2	1,149.3	64.5
36194 71	Food waste disposers (all sizes, of the electromechanical, comminutor type, operating in conjunction with household plumbing systems of the type generally used in residences)...	3	3,290.7	163.6	r3,272.8	r160.8
36194 72	Household trash compactors.....	6	227.1	48.3	215.0	47.1
36194 73	Household sewing machines, including heads for sale with cabinets or cases, and heads for sale separately.....	-	-	-	-	-
36194 99	Other major household appliances n.e.c.....	-	-	-	-	-
	Parts for other household appliances (n.e.c):					
36194 41	For electric water heaters.....	8	(X)	29.1	(X)	29.1
36194 42	For nonelectric water heaters.....	2	(X)	(D)	(X)	(D)
36194 43	For dishwashing machines.....	9	(X)	48.0	(X)	51.2
36194 44	For floor waxing, polishing, scrubbing and shampooing machines.....	1	(X)	(D)	(X)	(D)
36194 45	For food waste disposers.....	4	(X)	(D)	(X)	(D)
36194 46	For household trash compactors.....	2	(X)	(D)	(X)	(D)
36194 48	For household sewing machines, including cabinets and cases (value only).....	-	(X)	-	(X)	-
36194 97	For other major household appliances n.e.c.....	-	(X)	-	(X)	-

Note: The percent of estimation of each item is indicated as follows (see "Description of Survey" in the text for a discussion of estimation of missing reports): 4Ub to 25 percent of this item is estimated. 5Ob to 50 percent of this item is estimated. 6Over 50 percent of this item is estimated.

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. N.e.c. Not elsewhere classified. rRevised by 2 percent or more from previously published figures. (X) Not applicable.

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Table 2. COMPARISON OF VALUES OF SHIPMENTS OF MAJOR HOUSEHOLD APPLIANCES, AS REPORTED IN THE CENSUS, THE 1958 ANNUAL SURVEY OF MANUFACTURERS, AND THE 1958 CENSUS OF MANUFACTURES

(Values in thousands of dollars)

Product code	Product description	1963		1958		
					Annual Survey of Manufactures	
		Census	Census of Manufactures[1]	Major	Value	Standard error of estimate[2]
3631--	Household cooking equipment.....	(X)	2,211,[illegible]	(X)	1,[illegible]	1
3631(1)	Electric household ranges, ovens, and surface cooking units, equipment and parts.....	1,[illegible]	1,[illegible]	1,[illegible]	1,[illegible]	1
3631(2)	Gas household ranges, ovens, and surface cooking units, equipment, and parts.....	[illegible]	[illegible]	[illegible]	[illegible]	2
3631(3)	Other household ranges and cooking equipment (except gas and electric) and outdoor cooking equipment including parts and accessories.....	[illegible]	[illegible]	[illegible]	[illegible]	5
3631(3) (A)	Household cooking equipment n.e.c., typically for establishments with 20 employees or more.....	} [illegible]	{ [illegible]	} [illegible]	[illegible]	2
3631(3) (B)	Household cooking equipment n.e.c., typically for establishments with less than 20 employees.....		[illegible]			
3632--	Household refrigerators and freezers.....	(X)	[illegible]	(X)	[illegible]	1
3632()	Household refrigerators, including combination refrigerator-freezers.....	[illegible]	[illegible]	[illegible]	[illegible]	2
3632()	Home and farm freezers.....	[illegible]	[illegible]	[illegible]	[illegible]	1
3632()	Parts and attachments for household refrigerators and freezers.....	[illegible]	[illegible]	[illegible]	[illegible]	1
3632(3) (A)	Household refrigerators and freezers n.e.c., typically for establishments with 20 employees or more.....	} [illegible]	{ [illegible]	} [illegible]	[illegible]	29
3632(3) (B)	Household refrigerators and freezers n.e.c., typically for establishments with less than 20 employees.....		[illegible]			
3633--	Household laundry equipment.....	(X)	[illegible]	(X)	[illegible]	1
3633()	Household laundry machines and parts.....	[illegible]	[illegible]	(X)	(X)	(4)
3633()	Household washing machines, driers, and washer-drier combinations.....	[illegible]	[illegible]	[illegible]	[illegible]	1
3633()	Household laundry equipment, except washers, dryers, and washer-dryer combinations, including parts for all household laundry equipment.....	[illegible]	[illegible]	[illegible]	[illegible]	4
3633(3) (A)	Household laundry equipment n.e.c., typically for establishments with 20 employees or more.....	} [illegible]	{ [illegible]	} [illegible]	[illegible]	1
3633(3) (B)	Household laundry equipment n.e.c., typically for establishments with less than 20 employees.....		[illegible]			
3634--	Household appliances n.e.c.....	(X)	[illegible]	(X)	[illegible]	1
3634()	Water heaters, electric.....	[illegible]	[illegible]	[illegible]	[illegible]	1
3634()	Water heaters, except electric.....	[illegible]	[illegible]	[illegible]	[illegible]	3
3634()	Household appliances, n.e.c., and parts[3].....	[illegible]	[illegible]	(X)	(X)	(4)
3634()	Household dishwashing machines, food waste disposers, floor-waxing machines, and trash compactors.....	} [illegible]	{ [illegible]	[illegible]	[illegible]	1
3634()	Other major household appliances and parts n.e.c.....		[illegible]	[illegible]	[illegible]	5
3634(3) (A)	Household appliances n.e.c., n.e.s., typically for establishments with 20 employees or more.....	} [illegible]	{ [illegible]	} [illegible]	[illegible]	5
3634(3) (B)	Household appliances n.e.c., n.e.s., typically for establishments with less than 20 employees.....		[illegible]			

Note: In the 1967 Census of Manufactures, preliminary data for establishments of small single-unit companies (typically those with fewer than 20 employees for SIC 3631 and 3632; 10 employees for SIC 3633 and SIC 3634), were estimated from administrative records data rather than collected on questionnaires. These shipments are included in product codes 3631(3), 3632(3), 3633(3), and 3634(3). Products not adequately identified by detail product were coded to the appropriate industry [four-digit] followed by "(X)."

- Represents zero. n.e.c. Not elsewhere classified. n.e.s. Not specified by kind. [illegible]. (X) Not applicable.

[1] The annual survey of manufactures percentage standard errors shown are the approximate relative errors of the estimates of level. A more detailed description of the standard error of estimate is given in the introduction of the annual survey of manufactures, Value of Product Shipments, 1958 [illegible], under "Qualification of the Data."

[2] Partial data available only for the census of manufactures and the annual survey of manufactures. A substantial portion of these data are derived from administrative records. See note above.

[3] Prior to the 1967 Census of Manufactures, product code 3633, "Household laundry machines" was product codes 3633() and 3633().

[4] Prior to the 1967 Census of Manufactures, product code 3634, "Household appliances, n.e.c., and parts" was product codes 3634() and 3634().

Table 1. SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF MAJOR HOUSEHOLD APPLIANCES: 1988 AND 1987

(Quantity in thousands of units; value in millions of dollars)

Product description[1]	Manufacturers' shipments		Exports of domestic merchandise[2]			Percent exports to manufacturers' shipments		Imports for consumption[3,4]		Apparent consumption[5]		Percent imports to apparent consumption	
	Quantity	Value, f.a.s. plant	Quantity	Value at port	Estimated producers' price[6]	Quantity	Value	Quantity	Value in foreign country	Quantity	Value	Quantity	Value
1988													
Electric ranges and ovens, other than microwave:													
Total	3,139.9	647.4	57.1	29.4	36.7	2	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Microwave ranges and ovens	4,501.6	716.2	104.9	85.5	73.9	14	10	7,211.6	609.7	11,231.5	1,268.5	64	48
Parts for electric ranges and ovens	-	141.6	-	49.0	42.6	-	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Cooking apparatus, nonelectric, non-portable	2,341.7	619.3	93.3	28.5	17.5	4	3	437.9	24.3	2,585.9	622.3	17	4
Cooking apparatus, nonelectric, portable	10,329.1	490.6	435.5	17.1	13.7	4	3	5,788.0	37.2	15,193.6	504.1	25	7
Parts for nonelectric cooking apparatus	-	49.6	-	(NA)	(NA)	-	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Refrigerators and combination refrigerator-freezers	7,136.2	3,136.1	164.7	268.1	229.0	6	7	2,132.6	221.4	9,122.1	3,168.9	24	7
Food freezers, household type	1,179.2	252.7	40.4	15.9	13.6	3	5	191.0	50.6	1,329.8	289.7	14	17
Parts and attachments for household refrigerators and freezers	-	139.4	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Washing machines, household type	6,569.1	1,802.1	436.7	130.6	104.7	7	6	736.8	23.3	6,886.2	1,688.9	11	1
Dryers, household-type	4,449.6	914.3	129.0	40.7	34.4	3	4	57.5	10.9	4,381.1	840.8	1	1
Parts for household washing machines	-	149.0	-	28.3	21.9	-	14						
Parts for household dryers	-	22.3	(NA)	(NA)	(NA)	(NA)	(NA)						
Storage and other water heaters, electric	1,760.6	366.0	24.3	8.6	7.3	2	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Parts for electric water heaters	-	29.6	-	.8	.5	-	2						
Direct fired gas water heaters	4,215.9	526.5	104.1	14.0	11.0	3	2						
Water heaters, other than gas or electric	171.1	24.3	-	2.5	1.9	(NA)	(NA)	29.8	4.6	(NA)	(NA)	(NA)	(NA)
Parts for nonelectric water heaters	-	(D)											
Dishwashing machines, household type	3,872.0	881.1	67.5	20.5	17.5	2	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Parts for dishwashing machines	-	46.3	-	14.0	12.0	-	25						
Floor waxers, polishers, scrubbers, and shampooers, household type	1,361.4	76.3	-	2.9	2.2	(NA)	(NA)	-	5.1	(NA)	(NA)	(NA)	(NA)
Parts for floor waxing, polishing, scrubbing and shampooing machines	-	(D)											
Food waste disposers	3,280.7	163.6	273.3	17.8	15.2	8	9						
Parts for food waste disposers	-	(D)	(NA)	(NA)	(NA)	(NA)	(NA)						
Household trash compactors	327.2	68.3	-	10.6	12.5	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Parts for household trash compactors	-	(D)				(NA)	(NA)						
Household sewing machines	-	-	-	-	-	(NA)	(NA)						
Parts for household sewing machines	-	-	-	-	-	(NA)	(NA)						
Other major household appliances n.e.c.	-	-				(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Parts for other major household appliances n.e.c.	-	-	(NA)	(NA)	(NA)	(NA)	(NA)						
1987													
Electric ranges and ovens, other than microwave:													
Total	3,891.1	1,227.7	48.6	16.8	14.1	1	1	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Microwave ranges and ovens	9,609.5	741.3	474.7	48.5	58.7	10	8	8,988.8	719.8	17572.8	1407.3	64	51
Parts for electric ranges and ovens	-	192.0	-	19.0	13.6	-	11	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Cooking apparatus, nonelectric, non-portable	2,313.3	621.3	99.7	18.1	13.3	4	2	520.8	19.9	2,734.4	636.5	19	3
Cooking apparatus, nonelectric, portable	5,010.4	473.2	421.9	17.1	13.2	8	3	4,717.8	41.0	14,298.4	496.3	33	8
Parts for nonelectric cooking apparatus	-	91.6	-	14.9	12.8	-	14	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Refrigerators and combination refrigerator-freezers	7,251.1	3,217.3	249.6	175.1	207.4	3	4	1,713.3	221.9	8,661.6	3,111.0	20	7
Food freezers, household type	1,049.7	229.0	22.6	10.2	8.7	2	4	173.1	47.9	1,189.2	266.7	14	18
Parts and attachments for household refrigerators and freezers	-	71.3	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Washing machines, household type	6,099.8	1,633.2	236.8	85.1	71.1	4	4	684.6	20.6	6,507.9	1,637.3	11	1
Dryers, household-type	4,174.1	888.3	71.5	27.3	21.7	2	2	130.7	24.4	4,453.7	901.4	3	3
Parts for household washing machines	-	172.0	-	38.6	33.0	-	19						
Parts for household dryers	-	27.3	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Storage and other water heaters, electric	1,700.9	342.9	57.3	7.5	6.1	3	2						
Parts for electric water heaters	-	29.1	-	5.8	5.6	-	2						
Direct fired gas water heaters	4,882.0	498.6	85.3	11.7	9.9	2	2						
Water heaters, other than gas or electric	161.7	25.0	-	3.0	2.3	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Parts for nonelectric water heaters	-	(D)											
Dishwashing machines, household type	3,113.0	830.6	27.0	19.3	17.1	1	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Parts for dishwashing machines	-	35.3	-	11.0	10.8	-	31						
Floor waxers, polishers, scrubbers, and shampooers, household type	1,249.3	84.3	-	3.4	3.0	(NA)	(NA)	-	6.9	(NA)	(NA)	(NA)	(NA)
Parts for floor waxing, polishing, scrubbing and shampooing machines	-	(D)											
Food waste disposers	3,372.8	140.8	191.0	13.8	11.9	6	7						
Parts for food waste disposers	-	(D)	(NA)	(NA)	(NA)	(NA)	(NA)						
Household trash compactors	211.0	47.1	-	5.3	5.9	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Parts for household trash compactors	-	(D)											
Household sewing machines	-	-	19.3	17.1	15.9	(NA)	(NA)						
Parts for household sewing machines	-	-	-	19.9	19.7	(NA)	(NA)						
Other major household appliances n.e.c.	-	-	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Parts for other major household appliances n.e.c.	-	-											

- Represents zero. (D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. n.e.c. Not elsewhere classified.

[1] For comparison of SIC-based product codes with Schedule B import numbers and TSUSA import numbers, see table 4.

[2] Source: Bureau of the Census report EM 545, U.S. Exports.

[3] These values were derived by use of adjustment factors to estimate freight, insurance, and other charges incurred in moving goods to the port of export. This adjustment is made to convert the values to an approximation of the producers' value of exported goods. Current adjustment factors are based on data for 1985 which are published in Imports from Manufacturing Establishments, AM86-I. The adjustment factor for this report is 0.8500.

[4] Source: Bureau of the Census reports IM-145, Imports for Consumption.

[5] Apparent consumption is derived by subtracting exports from the total of manufacturers' shipments plus imports.

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Table 4. COMPARISON OF STANDARD INDUSTRIAL CLASSIFICATION-BASIS CODES, SCHEDULE B EXPORT NUMBERS, AND TSUSA IMPORT NUMBERS: 1988--Continued

Product code	Product description	Export number[1]	Product description	Import number[2]	Product description
36352 —	Food freezers, complete units, and freezing and/or storing frozen food (household type):				
	Upright type freezers:*				
36352 01	9.4 cu. ft. and under (under 264 liters)...				
36352 02	9.5 to 9.4 cu. ft. (264 liters but under 264 liters).....				
36352 04	9.5 to 13.4 cu. ft. (264 liters but under 382 liters).....				
36352 06	13.5 to 17.4 cu. ft. (382 liters but under 438 liters).....				
36352 08	17.5 to 17.4 cu. ft. (438 liters but under 492 liters).....				
36352 10	17.5 to 19.4 cu. ft. (492 liters but under 552 liters).....	692.3120	Freezers, household type	661.3540 661.3560	Upright freezers Chest type freezers
36352 12	19.5 to 21.4 cu. ft. (552 liters but under 606 liters).....				
36352 14	21.5 to 24. and over (606 liters and over).....				
	Chest type freezers:*				
36352 51	9.4 cu. ft. and under (under 264 liters)...				
36352 52	9.5 to 9.4 cu. ft. (264 liters but under 264 liters).....				
36352 54	9.5 to 13.4 cu. ft. (264 liters but under 382 liters).....				
36352 56	13.5 cu. ft. and over (382 liters and over).....				
36353 00	Parts and attachments for household refrigerators and freezers (excludes compressors and condensing units and ice making machines)*....	(NA)	(NA)	(NA)	(NA)
	Household laundry machines (domestic type machines as usually in use (coin-operated machines not exceeding 25 kg (55 lbs.)):				
	Washing machines, mechanical, including those with hydroextractor attachments:				
	Fully automatic washing machines (electric):				
36531 01	Coin-operated*.....	670.4070	Automatic washing machines, coin operated	670.4010	Automatic washing machines, coin operated
36531 02	Non-coin-operated.....	670.4075	Washing machines, other than types used in laundries, barber shops, commercial or coin-operated trailer coaches	670.4045	Washing machines, excludes coin-operated and commercial use
36531 04	Other washing machines, including machines with a built-in centrifugal dryer and ironing ironer*.....	670.4080	Washing machines, other than types used in laundries, barber shops, commercial or coin-operated types, nonautomatic		
	Ironers, mechanical (including heat):				
36532 01	Coin-operated*.....				
36532 02	Non-coin-operated.....	670.4090	Ironers, coin-operated	670.4300	Clothes ironers
36532 04	Other drying machines (such as extracting, wash conditioning, tumbling, drying, and combination thereof) (excludes machines for household laundry purposes, or attachments for household washing machines (food vegetable)):	670.4095	Ironers, other		
36533 00	Ice household washing machines.....	670.4100	Parts for household washing machines	(NA)	(NA)
36534 00	Coin machines, not for use permanent installation:	(NA)	(NA)		
	Storage type (gallons):				
36541 01	30 and under.....				
36541 02	31 to 40.....				
36541 03	41 to 52.....	692.4040	Storage water heaters, electric	(NA)	(NA)
36541 04	53 and over.....				
36541 05	Flash types, including circulating and portable storage.....	692.4070	Parts for electric storage water heaters	(NA)	(NA)
36542 01	Water heaters (except electric):				
36542 02	Gas:				
36542 03	Storage type (gallons):				
36542 04	30 and under.....	692.4110	Automatic gas water heaters		
36542 05	31 to 40.....				
36542 06	41 to 52.....				
36542 07	53 and over.....				
36542 08	Flash types, including circulating and portable storage.....				
36542 09	Oil:				
36542 10	Storage type (gallons):				
36542 11	30 and under.....				
36542 12	31 to 40.....				
36542 13	41 to 52.....				
36542 14	53 and over.....				
36542 15	Flash types, including circulating and portable storage.....	692.4120	Automatic water heaters (except gas) and parts	661.4510 661.4520 661.4530	Automatic water heaters and parts
36542 16	Parts for household water heaters.....				
	Household dishwashing machines, food waste disposers, floor-waxing machines, and steel cooperations and parts:				
	Dishwashing machines:				
36561 01	Portable type, including convertible type...	692.1010	Dishwashing machines, household type	(NA)	(NA)
36561 02	Built-in type.....				
36561 03	Parts for dishwashing machines.....	692.1090	Parts for dishwashing machines		
36561 04	Floor-waxing, polishing, scrubbing, and shampooing machines (for household use only)				
36561 06	Parts for floor waxing, polishing, scrubbing and shampooing machines.....	692.1080	Floor polishing and parts, thereof	661.0400	Floor polishing machines and parts
36561 08	Food waste disposers (all sizes, of the electric-motor-driven, household type, operating in conjunction with household plumbing system of the type normally used in residences).....	692.1010	Food waste disposers	(NA)	(NA)
36561 91	Parts for food waste disposers.....	(NA)	(NA)		
36561 92	Household trash compactors.....	678.7010	Refuse compactors and parts, thereof		
36561 94	Parts for household trash compactors.....				
36561 96	Household sewing machines.....	672.1400	Sewing machines, N.e.s.p.f.	672.1410	Sewing machines (not to dollars each but not over 20 dollars)
36561 98	Parts for household sewing machines.....	672.1500	Sewing machine parts, N.e.s.p.f.	672.1420	Sewing machines (over 20 dollars)
36567 01	Other major household appliances n.e.s.p.*.....	(NA)	(NA)	(NA)	(NA)
36567 91	Parts for other major household appliances n.e.s.p.*.....				

*Part of this code is comparable. (NA) Not available. N.e.s.p. Not elsewhere classified. N.e.s.p.f. Not specially provided for.

[1] Source: Bureau of the Census, Schedule B (1988 edition).
[2] Source: United States International Trade Commission, Tariff Schedules of the United States Annotated (1988).

DESCRIPTION OF SURVEY

Scope Of Survey. This survey covers manufacturers of major household appliances and parts in the United States.

Survey Methodology. The statistics in this publication were collected by mail on Bureau of the Census annual Form MA36F, Major Household Appliances. The survey panel includes all known manufacturers of major household appliances, approximately 113 companies.

Reliability of Data. Survey error may result from several sources: (1) inability to obtain information about all cases in the survey; (2) response errors; (3) definitional difficulties; (4) differences in the interpretation of questions; (5) mistakes in recording or coding the data obtained; and (6) other errors of collection, response, coverage, and estimation for missing data. These nonsampling errors also occur in complete censuses. Although no direct measurement of the biases due to nonsampling errors has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influence.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail logic edits. Missing figures are imputed based on yearly movements shown by reporting firms. Imputation generally is limited to a maximum of 10 percent are footnoted.

The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse because the actual yearly movements for nonrespondents may not closely agree with the imputed movements figures is not precisely known but is assumed to be small. The degree of uncertainty regarding the accuracy of the published data, however, increases as the percentage of imputation increases. Figures with imputation rates above 10 percent should be used with caution.

Revisions to Previous Period Data. Statistics for previous years may be revised as the result of corrected data from respondents, late reports for which imputations were made as described above, or other corrections. Figures which have been revised by more than 5 percent from previously published figures are indicated by footnotes.

Revisions may include changes to prior period data resulting from reconciliation of the results of this survey with the 1987 Census of Manufactures to correct differences in reported data between the two series and to identify and verify new establishments included in the scope of this survey. Table 2 presents a comparison of data from the two series by census product class following the reconciliation.

Adjustment for Price Change.All dollar figures included in this publication are in current dollars; i.e., they have not been adjusted for price change.

EXPLANATION OF TERMS

Quantity and Value of Shipments. The figures on quantity and value of shipments represent physical shipments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customer or branch to which the products are shipped, net of discounts, allowances, freight charges, and returns. Shipments to a company's own branches are assigned the same value as comparable sales to unaffiliated customers; i.e., the value includes an appropriate allocation of company overhead and profit. Products bought and resold without further manufacture are excluded.

COMPARISON OF EXPORT, IMPORT, AND DOMESTIC OUTPUT DATA

The Standard Industrial Classification (SIC) system used for domestic output and the statistical export and import commodity classifications were developed independently. This results in considerable difficulty in comparing the three types of data for many commodity areas. The domestic output classification is based on type of industry; on the other hand, the export and import classification system is more materials oriented. Also, there are a substantial number of imported commodities which have no comparable domestic output classification. The relationships shown in this report should be considered only as approximations, since, in addition to the problems mentioned above, there are also the following problems affecting the comparability of the three sets of data.

Valuation. There are different methods of valuation for the three types of data:

- *Domestic Output*. Valued at the point of production. It includes the net sales price, f.o.b. plant, after discounts and allowances, exclusive of freight charges and excise taxes.

- *Exports*. Valued at the point of exportation. It includes the selling price, or cost if not sold, and inland freight, insurance and other charges to the export point.

  Estimated producers' values of exports have also been developed. These values more closely approximate the values reported for domestic output because they exclude freight, insurance, and other charges applied from the producing plant to the export point.

- *Imports.* Valued at the first port of entry in the United States. It includes c.i.f. (cost, insurance, and freight), duty, and other charges to the import point.

Duplication in Quantity and Value of Output. Because producers' shipments of some commodities may be used as materials for incorporation into other commodities, combinations of data for such commodities may contain a certain amount of duplication. Thus, percentages of exports to output or imports to apparent consumption (output plus imports minus exports) at fourdigit or broader levels may be understated. Where duplication is known to be substantial, the output data are appropriately noted in the table.

Low-Value Import and Export Transactions. Detailed commodity information is not included for individual import shipments valued at not more than $1,500. Generally, detailed commodity information is not included for individual import shipments valued at not more than $1,000. For textiles and textile products, gloves, footwear, and miscellaneous rubber and plastics products, detailed commodity information is not included for individual import shipments valued at not more than $250. This is believed to have only negligible effects on the statistics for the bulk of the commodities.

Manufacturers' Shipments, Not Specified by Kind. The value of manufacturers' shipments at the four-digit industry level often includes a small amount which is not distributed among the individual five-digit product classes. Export and import percentages at the more detailed levels might, therefore, be slightly overstated.

Time Lag Between Output and Exports. There will be a lag between the time a commodity is produced or shipped by the producer and the time it is actually exported, especially when intermediaries (wholesalers, exporters, etc.) are involved. Ordinarily, this type of discrepancy is insignificant in annual figures.

"Direct" vs "Total" Commodity Exports and Imports. Export and import data do not include materials which are incorporated into other more finished products and exported or imported in finished form. Thus, by showing only direct exports and imports, the relation of exports to output and imports to apparent consumption for intermediate products is considerably understated.

Used Commodities. With a few exceptions, used or rebuilt commodities are classified in the same import or export codes as is new merchandise. Percentages are thus overstated to the extent that used or rebuilt products are significant in trade.

Geographic Area of Coverage. Import and export data reflect the movement of merchandise into and out of U.S. foreign trade zones, the U.S. Virgin Islands, and the U.S. customs territory (includes the 50 States, the District of Columbia, and Puerto Rico).

HISTORICAL NOTE

Data on major household appliances have been collected by the Bureau of the Census since 1968. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. A list of these libraries may be obtained from the Bureau of the Census regional offices:

Office	Telephone
Atlanta, Georgia	(404) 347-2271
Boston, Massachusetts	(617) 223-2327
Charlotte, North Carolina	(704) 371-6142
Chicago, Illinois	(312) 353-6251
Dallas, Texas	(214) 767-0621
Denver, Colorado	(303) 236-2200
Detroit, Michigan	(313) 226-7742
Kansas City, Kansas	(816) 374-4601
Los Angeles, California	(213) 209-6616
New York, New York	(212) 264-3860
Philadelphia, Pennsylvania	(215) 597-4920
Seattle, Washington	(206) 442-7828

Historical data are also available on microfiche. For further information contact the Bureau of the Census, Data User Services Division, (301) 763-4100.

RELATED REPORTS

The Bureau of the Census publishes the following related reports:

Series	Frequency	Title
Current Industrial Reports		
MA35M	Annually	*Air Conditioning and Refrigeration Equipment*
MA36E	Annually	*Electric Housewares and Fans*
MA36M	Annually	*Radio and Television Receivers, Phonographs, and Related Equipment*

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Series	Frequency	Title
Other Industry Reports		
M3-1	Monthly	*Manufacturers' Shipments, Inventories, and Orders*
(AS)	Annually	Annual Survey of Manufactures (ASM)
(MC)	Quinquennially	Census of Manufactures
Foreign Trade Reports		
EM 546 FT 446	Monthly Annually	*U.S. Exports—Schedule B—Commodity by Country*
IM 146 FT 246	Monthly Annually	*U.S. Imports for Consumption—TSUSA—Commodity by Country*

CONTACTS FOR DATA USERS

Subject Area	Contact	Phone Number
Current Industrial Report MA36F	Odelle S. Thomas	(301) 763-2824
Classification Systems Comparability	Francis McCormick (ESD)	(301) 763-1935
Foreign Trade	Trade Data Inquiries Staff (FTD)	(301) 763-5140
Census/ASM	Tom Lee	(301) 763-5752
International Trade Administration	John Harris	(202) 377-1178
To order a Current Industrial Report	Superintendent of Documents (GPO)	(202) 783-3238
To subscribe to a Census Bureau publication	Superintendent of Documents (GPO)	(202) 275-3054

ACKNOWLEDGMENTS

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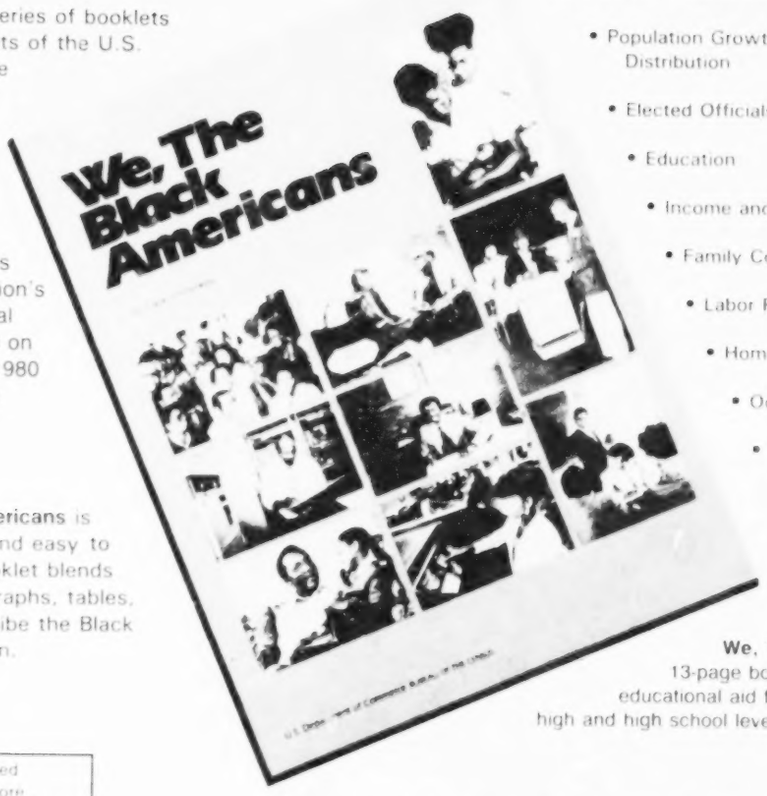

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